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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/529,339	09/16/2005	Grant Stuart Richardson	41577/314121	8890
23370	7590	10/30/2007		
JOHN S. PRATT, ESQ KILPATRICK STOCKTON, LLP 1100 PEACHTREE STREET ATLANTA, GA 30309			EXAMINER DIXON, ANNETTE FREDRICKA	
			ART UNIT 3771	PAPER NUMBER
			MAIL DATE 10/30/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/529,339	Applicant(s) RICHARDSON ET AL.	
	Examiner Annette F. Dixon	Art Unit 3771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 August 2007.
 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 and 16 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) ☐ Claim(s) _____ is/are allowed.
 6) ☒ Claim(s) 1-14 and 16 is/are rejected.
 7) ☐ Claim(s) _____ is/are objected to.
 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>8/27/07</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is in response to the amendment filed on August 27, 2007.

Examiner acknowledges claims 1-14 and 16 are pending in this application, with claim 1 having been currently amended, claim 15 having been cancelled and claim 16 having been newly added.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 3-6, 14, and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Kay (6,729,331).

As to Claim 1, Kay discloses a valve member (36) for a respirator comprising a valve body having an valve outlet portion (7) and a valve inlet portion (30) which together define a valve cavity for a valve mechanism permitting gas flow from the valve inlet portion (30) to the valve portion member (36), an air purge means (the combination of elements 12, 18, and 19; Column 5, Lines 49-61) comprising a purge inlet connectable to an air pressure supply means (defined by the pressure differential between the first and second chambers, elements 31 and 39 respectively) an air purge

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outlet (23) and an air deflection means (9) in which the deflection means is spatially arranged relative to the valve mechanism (36) and purge outlet (23) so that, in use, air exiting the purge outlet (23) and incident the air deflection means provides a curtain of air over the valve mechanism

As to Claim 3, Kay discloses the valve inlet portion (30) provides a seat (5) for the valve mechanism.

As to Claim 4, Kay discloses the purge inlet and outlet is associated with the valve inlet portion via the fluid communication of gaseous fluids.

As to Claim 5, Kay discloses the deflection means (9) is associated with the valve outlet portion (7) via the fluid communication of gaseous fluids.

As to Claim 6, Kay discloses the purge outlet (23) comprises one or more bores or channels in an upper surface of the valve inlet portion. (Figure 1).

As to Claim 14, Kay discloses the valve mechanism (36) comprises a membrane (6).

As to Claim 16, Kay discloses the valve mechanism is for a self-contained breathing apparatus (Abstract). Inherently, this disclosure does not limit the operation of the valve to underwater conditions, but includes surface conditions. Therefore, the operation of the valve in surface conditions would enable a curtain of air to be provided continuously when the valve assembly is in use.

Claim Rejections - 35 USC § 103

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4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 2 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kay (6,729,331).

As to Claim 2, Kay discloses a valve assembly comprising all the recited elements, yet does not expressly disclose the structural orientation of the valve body to be in a cylindrical shape. However, at the time the invention was made the use of a cylindrical shape of a valve member was well known to assist in creating a laminar flow profile. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Kay to include the cylindrical shape to enable smooth transitions of flow, as the Applicant has done. Moreover, Applicant has not asserted that the specific structural orientation of the valve assembly provides a particular advantage, solves a stated problem, or serves a particular

purpose, thus the structural orientation of the valve assembly lacks criticality in its design.

As to Claim 7, Kay discloses a valve assembly with one or more bores, yet does not expressly disclose the width of the bores or channels towards the outlet portion. However, at the time the invention was made the specific width of the bores would be designed to enable effective flow of air through the system. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Kay to a specific width thereby providing for smooth laminar flow during operation, as the Applicant has done. Moreover, Applicant has not asserted that the specific width of the bores provides a particular advantage, solves a stated problem or serves a particular purpose, thus the specific width of the bores lacks criticality in its design.

7. Claims 8-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kay (6,729,331) in view of Welker (5,769,388).

As to Claims 8-13, Kay discloses a valve assembly comprising all of the recited elements, yet does not expressly disclose the use of vanes toward the valve inlet providing for flow regulation and deflection of airflow within the valve assembly. However, at the time the invention was made, the use of the recited elements were known. Specifically, Welker discloses the use of a flow diffuser utilized in combination with a valve assembly to assist in the gas flow profiling of the air passing through the valve assembly. Thereby, utilizing vanes to control the flow of the air through the valve

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assembly producing laminar flow patterns (Abstract). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Kay to include the particulars of the air deflector to enable the flow profile of air to have smooth and laminar characteristics.

Response to Arguments

8. Applicant's arguments filed August 27, 2007 have been fully considered but they are not persuasive. Applicant asserts the prior art made of record does not teach or fairly suggest a purging that is continuous and the prior art made of record is only intended to be used underwater. Examiner respectfully disagrees with Applicant's assertions.

Regarding the continuous assertion, Applicant is advised this continuous purging feature is not recited in the rejected claim(s) 1-14. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Regarding the newly recited claim 16, Applicant is advised that the prior art reference relates to self-contained breathing equipment, and does not limit the operational scope of the device to only underwater environments. Thus, inherently when the prior art device is utilized in surface environments the curtain of air will be continuously provided to the valve assembly.

Regarding the intended use assertion, Applicant is advised a recitation of the intended use of the claimed invention must result in a structural difference between the

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claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

In light of the aforementioned reasons, the rejections of the claims have been maintained.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

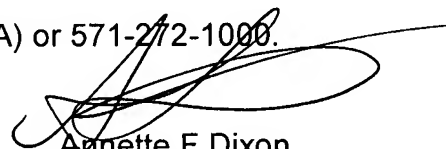
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Annette F. Dixon whose telephone number is (571) 272-3392. The examiner can normally be reached on Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Justine Yu can be reached on (571) 272-4835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Annette F Dixon
Examiner
Art Unit 3771



JUSTINE R. YU
SUPERVISORY PATENT EXAMINER
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10/29/07